CLAIMS:

1.   A method of determining an eigenspace for representing a plurality of training speakers, the method comprising the following steps:
- developing speaker-dependent sets of models for the individual training speakers while training speech data of the individual training speakers are used, the models (SD) of a set of models being described each time by a plurality of model parameters
- displaying a combined model for each speaker in a high-dimensional vector space (model space) by concatenation of a plurality of the model parameters of the models of the sets of models of the individual training speakers to a respective coherent supervector
- performing a transformation while reducing the dimension of the model space to derive eigenspace basis vectors ($\underline{E}_e$), characterized by the following steps:

2.   A method as claimed in Claim 1, characterized in that the models (SI, SD) are Hidden Markow models in which each state of a single model (SI. SD) is described by a respective mixture of a plurality of probability densities and the probability densities are described each time by a plurality of acoustic attributes in an acoustic attribute space.

3.   A method as claimed in Claim 1 or 2, characterized in that the transformation for determining the eigenspace basis vectors ($\underline{E}_e$) makes use of a reduction criterion based on the variability of the vectors to be transformed.

4.   A method as claimed in one of the Claims 1 to 3, characterized in that for the eigenspace basis vectors ($\underline{E}_e$), associated ordering attributes are determined.

5.   A method as claimed in Claim 4, characterized in that the eigenspace basis vectors ($\underline{E}_e$) are the eigenvectors of a correlation matrix determined by means of the supervectors and the ordering attributes of the eigenvalues belonging to the eigenvectors.

6.   A method as claimed in Claim 4 or 5, characterized in that for reducing the dimension of the eigenspace a certain number of eigenspace basis vectors (E_e) are rejected while taking the ordering attributes into account.

5   7.   A method as claimed in one of the Claims 1 to 6, characterized in that for the high-dimensional model space first a reduction is made to a speaker subspace via a change of basis, in which speaker subspace all the supervectors of all the training speakers are represented and in this speaker subspace the transformation is performed for determining the eigenspace basis vectors (E_e).

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8.   A method as claimed in Claims 1 to 7, characterized in that the transformation is performed for determining the eigenspace basis vectors (E_e) on the difference vectors of the supervectors of the individual training speakers to an average supervector.

15   9.   A speech recognition method in which a basic set of models is adapted to a current speaker on the basis of already observed speech data to be recognized of this speaker while an eigenspace is used, which eigenspace was determined based on training speech data of a plurality of training speakers in accordance with a method as claimed in one of the preceding Claims.

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10.   A computer program with program code means for executing all the steps of a method as claimed in one of the preceding Claims when the program is executed on a computer.

25   11.   A computer program with program code means as claimed in Claim 10, which are stored on a computer-readable data carrier.